

2. The disk as recited in claim 1, wherein said position offset signal has a position offset signal amplitude that is stored in said calibration storage field.

3. The disk as recited in claim 1, wherein said track includes a data field, said calibration field being located in said data field.

4. The disk as recited in claim 1, wherein said servo field of said one of said tracks and said servo field of said second one of said tracks each contains a set of servo bits including an A bit and a B bit that have a common boundary located at the track centerline.

5. A hard disk drive, comprising:

a housing;

an actuator arm mounted to said housing;

a head that is mounted to said actuator arm, said head having a write element and a read element, the read element and the write element having a position offset;

a spin motor mounted to said housing; and

a disk attached to said spin motor, said disk having a plurality of tracks that each have a centerline, one of said tracks having a servo field and a calibration field with a calibration field centerline that is offset from the track centerline, said calibration field includes a single calibration burst providing a burst profile with a peak value, that is used to generate a position offset signal, said calibration burst being written by said head, a second one of said tracks having a servo field and a calibration storage field with a calibration storage field center line that is centered along the track centerline, wherein information representing the position offset is stored in the calibration storage field.

6. The hard disk drive as recited in claim 5, wherein said position offset signal has a position offset signal amplitude that is stored in said calibration storage field.

7. The hard disk drive as recited in claim 5, wherein said track includes a data field, said calibration field being located in said data field.

8. The hard disk drive as recited in claim 5, wherein said servo field of said one of said tracks and said servo field of said second one of said tracks each contains a set of servo bits including an A bit and a B bit that have a common boundary located at the track centerline.

9. A method for calibrating and storing information representing the offset between a read element and a write element of a head in a hard disk drive, comprising the steps of:

a) providing a disk having a plurality of tracks each having a centerline, a first one of said tracks having a servo field and a single calibration burst providing a burst profile with a peak value, said calibration burst having a calibration burst centerline that is offset from the track centerline, a second one of said tracks having a servo field and a calibration storage field with a calibration storage field centerline that is centered along the track centerline;

b) measuring a profile of the single calibration burst;

c) generating a position offset signal corresponding to the sensed single calibration burst, said position offset signal having an offset amplitude; and

d) storing said position offset signal amplitude in the calibration storage field.

10. The method of claim 9 further comprising the steps of:

e) aligning said read element with the calibration storage field centerline; and

f) reading the position offset signal amplitude located on the calibration storage field.

11. The method as recited in claim 9, wherein step b) comprises the steps of:

- b1) aligning a read element over a first position of the track that -50% from the track centerline;
- b2) sensing the magnitude of the calibration burst at the first position;
- b3) aligning the read element over a plurality of positions of the track that is between -50% from the track center line and +50% from the track centerline;
- b4) sensing the magnitude of the calibration burst at the plurality of positions; and

b5) storing the magnitudes of the calibration burst corresponding to the first position and the plurality of positions as the provide of the calibration burst.

12. The method as recited in claim 9, further comprising the steps of:

- g) aligning the read element over the track centerline; and
- h) moving the read element in accordance to the position offset signal amplitude stored in the memory device.

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13. A disk for a hard disk drive that has a head which contains a read element and a write element that are separated by a position offset, comprising:

the disk that has a plurality of tracks which each have a track centerline, said tracks including a first dedicated track that contains a position offset information aligned with the centerline of said first dedicated track.

14. The disk as recited in claim 13, wherein the tracks include a second dedicated track that includes a data area and a servo area, said data area having a centerline offset from a centerline of said servo area.

15. The disk as recited in claim 14, wherein said first dedicated track is a maintenance track and said second dedicated track is a data track.

16. The disk as recited in claim 14, wherein said second dedicated track includes an A servo burst and a B servo burst that have a common boundary with the centerline of said second dedicated track, a C servo burst aligned with the centerline of said second dedicated track and a D servo burst offset from the centerline of said second dedicated track.

17. A hard disk drive, comprising:

a spin motor;
an actuator arm;
a head that is coupled to said actuator arm, said head containing a read element and a write element separated by a position offset; and,

a disk that is attached to said spin motor and coupled to said head, said disk that has a plurality of tracks which each have a track centerline, said tracks including a first dedicated track that contains a position offset information aligned with the centerline of said first dedicated track.

18. The disk as recited in claim 17, wherein the tracks include a second dedicated track that includes a data area and a servo area, said data area having a centerline offset from a centerline of said servo area.

19. The disk as recited in claim 18, wherein said first dedicated track is a maintenance track and said second dedicated track is a data track.

20. The disk as recited in claim 18, wherein said second dedicated track includes an A servo burst and a B servo burst that have a common boundary with the centerline of said second dedicated track, a C servo burst aligned with the centerline of said second dedicated track and a D servo burst offset from the centerline of said second dedicated track.

21. A method for writing a position offset onto a disk of a hard disk drive, comprising:
aligning a write element of a head, that has a read element separated from the write
element by a position offset, with a centerline of a first dedicated track of a disk; and,
writing a position offset information onto said first dedicated track so that the
position offset information is aligned with the centerline of said first dedicated track.

22. The method of claim 21, further comprising aligning the read element with the centerline of said first dedicated track when said hard disk drive is initially powered on and reading said position offset information.

23. The method of claim 21, further comprising aligning the read element with the centerline of a second dedicated track by reading an A servo burst and a B servo burst that have a common boundary with the centerline of the second dedicated track, a C servo burst aligned with the centerline of the second dedicated track and a D servo burst offset from the centerline of the second dedicated track, and reading the position offset.

24. A disk for a hard disk drive that has a head which contains a read element and a write element that are separated by a position offset, comprising:

a disk that has a plurality of tracks which each have a track centerline, at least one of said tracks having a calibration burst that provides a varying burst profile with a peak value that is used to generate a position offset.

25. The disk as recited in claim 24, wherein said calibration burst is offset from the centerline of the said at least one of said tracks.

26. The disk as recited in claim 24, wherein said calibration burst is located within a data field of said at least one of said tracks.

27. The disk as recited in claim 25, wherein said at least one of said tracks includes an A servo burst and a B servo burst that have a common boundary with the centerline of said at least one of said tracks, a C servo burst aligned with the centerline of said at least one of said tracks and a D servo burst offset from the centerline of said at least one of said tracks.

28. A hard disk drive, comprising:

a spin motor;

an actuator arm;

a head that is coupled to said actuator arm, said head containing a read element and a write element separated by a position offset; and,

a disk that is attached to said spin motor and coupled to said head, said disk having a plurality of tracks which each have a track centerline, at least one of said tracks having a calibration burst that provides a varying burst profile with a peak value that is used to generate a position offset.

29. The disk as recited in claim 28, wherein said calibration burst is offset from a centerline of said at least one of said tracks, wherein said at least one of said tracks includes an A servo burst and a B servo burst that have a common boundary with the centerline of said at least one of said tracks, a C servo burst aligned with the centerline of said at least one of said tracks and a D servo burst offset from the centerline of said at least one of said tracks.

29. A method for determining a position offset between a write element and a read element of a head in a hard disk drive, comprising:

reading a calibration burst on a track of a disk, said calibration burst having a varying burst profile with a peak value;

comparing a read value with the varying burst profile to determine a position offset.

34. The method of claim 29, further comprising aligning the read element with the centerline of said track by reading an A servo burst and a B servo burst that have a common boundary with the centerline of said track, a C servo burst aligned with the centerline of said track and a D servo burst offset from the centerline of said track, and reading the position offset.